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ABSTRACT

This packet contains sample DACUM (Developing a Curriculum) materials developed for two companies (The Hibbert Group and Trane Corporation). For the Hibbert Group, materials include the following: job and task descriptions for data services, inventory control, planning, and quality services personnel; a curriculum for those employees in reading, writing, mathematics, oral communication and interpersonal skills, technology in the workplace, and problem-solving and critical thinking skills that includes goals and topics; job and task descriptions for production and warehouse personnel; and a curriculum in reading, writing, oral communication and interpersonal skills, mathematics, technology in the workplace, English as a second language, and problem-solving skills for those employees with goals and course topics. The Trane Corporation materials are as follows: job and task descriptions for assemblers who build heating and air conditioning units and a curriculum for those employees that includes reading, writing, oral communication and interpersonal skills, mathematics, technology in the workplace, problem-solving skills and English as a second language, with goals and suggested course topics. (KC)

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ED 368 988

Skills for Tomorrow
Workplace Skills Project
DACUM Charts

Mercer County Community College

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SKILLS FOR TOMORROW

DACUM
THE HIBBERT GROUP
JOB DESCRIPTION
Data Services, Inventory Control, Planning and Quality Assurance

DACUM PANEL MEMBERS

Carole DeHart - Planner
Patricia Duncan - Account Coordinator
Kim Henderson - Order Processing Clerk
Pamela Martin - Quality Assurance
Chris Mazzoni - Sr. Account Coordinator, Data Services
Melinda Stinson - Teleservices Representative
Lisa Wagner - Sr. Customer Service Representative

DACUM FACILITATORS

Nunzio Cernero
Organization Development Specialist, MCCC

Elaine Weinberg
Director, Workplace Literacy Project, MCCC

RECORDERS

Lorna Burt, Carol Lewandowski, Ave Pollak
Education Specialists, MCCC

Linda Alvarez
Administrative Secretary, MCCC

DATE
December 8 and 9, 1992

LOCATION
Mercer County Community College

DATA PROCESSING, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE work together as a marketing support team to coordinate timely and accurate processing of customer requests.

TASKS →

QUALITY ASSURANCE							
I. Inspector							
A. Learn Hibbert's Standards	1. Complete formal training	2. Attend account meetings	3. Review standards with departments	4. Attend vendor seminars			
B. Attend Department Meeting	1. Prepare meeting input	2. Present priority issues report	3. Take notes	4. Suggest recommendations			
C. Monitor Procedures	1. Read jacket/job	2. Match results against standards	3. Report problem, if required	4. Enter problem on report	5. Communicate problem to supervisor	6. Report success	7. Enter success record on report	8. Release jacket or job
D. Maintain Procedures	1. Review existing procedures	2. Identify potential problems	3. Discuss problem areas	4. Recommend procedure changes	5. Report on procedure changes		
E. Provide Communications	1. Prepare status report	2. Prepare inspection report	3. Provide verbal reports	4. Research customer complaint reports	5. Attend quality meetings	6. Fax information to customers	
II. Supervisor	A. Provide advice to other departments on quality issues			B. Assist in the process set up for new jobs			
III. Quality Data Analyst	A. Enter report data						
IV. Quality Analyst	A. Analyze information for other departments						
PLANNER							
A. Prepare a Job Jacket	1. Receive job requests	2. Determine jacket type	3. Log jacket out	4. Input same job information into computer	5. Order materials from outside vendors as necessary	6. Check availability of customer's stock at Hibbert's warehouse	7. Order stock for job samples	8. Write-up preliminary job instructions
	9. Check postal regulations	10. Order stock deductions from inventory	11. Receive authorization number	12. Order transfer of stock within warehouse, if necessary	13. Prepare paperwork	14. Write-up job jacket	15. Prioritize job	16. Quality check job jacket
	17. Release job jacket							
B. Develop Schedule	1. Contact vendors	2. Contact other departments	3. Prepare and update master calendar	4. Distribute calendar	5. Notify management of deadline conflicts, if necessary	6. Complete paperwork		
C. Monitor Progress	1. Review daily schedule	2. Contact vendors	3. Contact other departments by telephone	4. Solve problems	5. Prepare job change notice	6. Attend project meetings	7. Advise customer of progress	8. Close job file
D. Paperwork	1. Prepare job jackets (4 types)	2. Prepare data forms	3. Complete art spec. sheet	4. Complete purchase requisitions	5. Complete delivery receipts	6. Complete status report	7. Complete cutting tickets	8. Complete postal request forms
	9. Prepare daily status report							
E. Attend Department and Account Team Meetings	1. Report status of jobs	2. Inform others of changes						
G. Communication	1. Write memos	2. Complete status reports	3. Finish special billing forms	4. Complete contact reports	5. Schedule, organize and hold meetings if required	6. Bring questions or updates to meeting	7. Update department progress status	8. Attend department and account meetings
	9. Attend account team meetings if required	10. Attend data team meetings if required	11. Make presentations at meetings when necessary	12. Fax information to customers				

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DATA SERVICES	TASKS							
I. Direct Mail and Master Project Management Divisions								
A. Develop Procedures	1. Read jacket to determine needs of job	2. Identify customer requirements	3. Create system specifications	4. Create system tests if required	5. Initiate programmer and or data entry requests (PCR)	6. Consult programmer in system setup	7. Run system tests for program accuracy	8. Develop process
	9. Assure stock availability	10. Prioritize accounts and duties						
B. Order Processing	1. Receive phone and fax orders (account specific)	2. Prepare source documents	3. Edit source documents	4. Input data into system	5. Assure quality control of data	6. Verify customer supplied data		
C. Letter Creation	1. Receive text copy from planner or customer	2. Key in letter if PC	3. Write text if required	4. Edit and proofread text from customer	5. Notify customer of revisions	6. Create PCR if laser job	7. Obtain quality assurance approval	8. Create sample proofs
	9. Obtain customer and planner approvals							
D. Order Fulfillment	1. Follow instructions for job requirements	2. Write job instructions which initially came from planner	3. Run jobs when applicable	4. Observe print process	5. Print PC output when applicable	6. Check accuracy of job sequence	7. Perform quality check	8. Fill out quality control check list(s)
	9. Box output	10. Complete paperwork	11. Send order to appropriate department	12. Distribute report				
E. Documentation	1. Complete quality check list forms	2. Update logs	3. Write instructions for data preparation	4. List job procedures				
F. Customer Service	1. Discuss program and answer questions with client's customer	2. Follow through updates with external customers	3. Update program with internal personnel	4. Communicate with inventory control/production	5. Provide proactive suggestions to customers if required			
G. Communication	1. Write memos	2. Complete status reports	3. Finish special billing forms	4. Complete contact reports	5. Schedule, organize and hold meetings if required	6. Bring questions or updates to meeting	7. Update department progress status	8. Attend department and account meetings
	9. Attend account team meetings if required	10. Attend data team meetings if required	11. Make presentations at meetings when necessary	12. Fax information to customers				
H. Database Management	1. Receive file maintenance from customer or planner	2. Apply maintenance to appropriate file	3. Monitor status of control tables, i.e., zip codes	4. Perform system maintenance when necessary	5. Perform quality assurance check	6. Delegate responsibilities (if appropriate)	7. Distribute work flow as required	
I. Billing Reconciliation (if customer requests)	1. Review billing reports	2. Make adjustment to billing file	3. Reconcile rebate or product fulfillment program	4. Produce final reports	5. Distribute reports	6. Produce PC reports when necessary		
J. External Training	1. System demonstration	2. Train client on system	3. Train new or cross train employees					
II. Teleservices								
A. Answer Incoming Calls	1. Test telephone lines daily	2. Answer phones	3. Read appropriate script to customer	4. Provide consumer referrals	5. Input information in PC manually from customer	6. Batch source documents	7. Forward scripts to key entry	
B. Order Processing	1. Take maintenance to key entry area	2. Receive maintenance from key entry area if required	3. Apply maintenance to file	4. Verify credit card and checks				
C. Order Fulfillment	1. Receive output of maintenance file	2. Process output	3. Assure maintenance and reports are correct	4. Remove unnecessary material from output	5. Prepare requisition	6. Distribute hot lead cards to sales rep		
D. Database Management	1. Update files (add, change or delete)	2. Produce reports on demand for accounts	3. Monitor workload	4. Assist other departments with overflow work				
E. Complete Paperwork	1. Fill out call log daily	2. Provide daily product status (as per customer request)	3. Complete weekly status report	4. Finish daily time card	5. Prepare monthly billing	6. Create memos as required	7. Take messages when necessary	
F. Perform Special Outbound Projects	1. Update mailing list database	2. Place outbound telephone calls at customer request to create database	3. Complete script	4. Process information as per client's specs				
G. Communications	1. Coordinate accounts	2. Give customer status of account when requested	3. Handle customer complaints	4. Direct calls to appropriate coordinator	5. Attend account meetings and report on account	6. Update staff of customer changes	7. Fax information to customers	8. Cross-train co-workers for necessary jobs

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	TASKS							
II. Inquiry Handling								
A. Receive inquiries from customer for requests	1. Receive multiple leads from reader services	2. Separate by products, magazines, etc.	3. Batch by companies	4. Send to key entry for keying and verification	5. Receive customer specific output from operations	6. Separate labels	7. Check for accuracy, completeness and sequence	8. Send to production for fulfillment
	9. Notify sales force when request made							
B. Maintain reports and service requests	1. Get report for each company	2. Mail to specific reps	3. Detail reports - month to date	4. Verify account report by magazine year to date	5. Mail information to sales reps			
C. Maintain updated territory information	1. Update information for sales reps to each area	2. Reassign zip codes to correct rep if required						
D. Maintain products	1. Verify product for order accuracy	2. Update files for correctness						
INVENTORY CONTROL								
I. Customer Service								
A. Set up new accounts	1. Get job procedure from planning and external customer	2. Set up inventory requirements	3. Update monthly client report	4. Maintain dealer files (customer's customer)	5. Notify all departments of new account			
B. Monitor Inventory	1. Reconcile number of orders that come in against number of orders that go out	2. Monitor number of items on order	3. Monitor numbers of pieces on order					
C. Maintain Inventory	1. Edit low and out notices for reordering purposes	2. Edit expired materials notices	3. Instruct warehouse to destroy outdated material	4. Instruct warehouse to do a stock transfer	5. Issue physical counts to warehouse daily	6. Issue adjustments to inventory	7. Review jackets from planning to assure stock deduction	8. Report stock not deducted to appropriate department if necessary
	9. Review daily, weekly and monthly reports	10. Issue back order reports to customer for unavailable items (I.Q.)						
D. Receiver Processing	1. Edit receiver documents	2. Update the inventory of receipt	3. Distribute receiving document to specific personnel and customer	4. Mail sample of items received to customer	5. File receipts			
E. Order Processing	1. Receive orders	2. Edit orders	3. Batch orders	4. Forward orders to order processing	5. Coordinate distribution of order forms to distributors	6. Trace orders if necessary		
F. Provide Training	1. Train new employees and co-workers for backup	2. Provide computer training of new systems	3. Train clients on the system					
G. Provide Tours	1. Prepare materials	2. Give the presentation	3. Provide tour for new employees					
H. Create Customer Reports	1. Receive specifications from customer or sales rep	2. Write PCR to programming	3. Edit report received from programmer	4. Return incorrect report to programmer, if necessary	5. Send correct reports to customer			
I. Communication	1. Communicate through E-mail to customers and internal departments	2. Complete weekly status reports to customer and internal departments	3. Fax information as required	4. Review status reports from planning to determine job completion	5. Distribute updated information to relevant departments	6. Create external and internal memos	7. Attend account, team, customer and department meetings	8. Make on-site visits
J. Order Processing								
A. Perform Morning & Midday Breakdown	1. Match picking ticket with requisition	2. Perform physical counts of requisition	3. Separate each order into warehouse location	4. Send orders to production	5. Distribute reports to appropriate departments			
B. Answer Incoming Calls	1. Answer phone with appropriate company name and information	2. Prompt customer to answer questions if required	3. Enter order into computer	4. Determine method of shipment and time requirements	5. Give order number to customer or authorization number to planning department	6. Call customer for special authorization	7. Transfer calls to appropriate internal personnel as needed	8. Log in order information
	9. Make changes if customer does not approve							
C. Process Orders	1. Receive order from customer service	2. Process backorder releases	3. Release inquiry packets	4. Key order into computer	5. Assign order number to service document if necessary	6. Verify accuracy of order either through customer service or quality assurance	7. File documentation	
D. Communication	1. Communicate with other departments	2. Process back order releases	3. Contact production to transfer stock	4. Key order into computer	5. Assign order number to service document if necessary	6. Verify accuracy of order either through customer service or quality assurance	7. File documentation	
E. Paperwork	1. Key in and verify adjustments to inventory	2. Complete time card	3. Log in order information	4. Fill out quality order processing report for quality assurance				

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TRAITS AND ATTITUDES

Accurate
C.A.R.E.
Can follow instructions
Career Oriented
Dedicated
Detail oriented
Discreet
Efficient
Flexible
Follow through
Get along with people
Helpful
Honest
Lifelong willing learner
Open minded
Organized
Outgoing
Patient
People oriented
Pleasant
Proactive
Productive
Professional
Punctual
Responsive
See whole picture
Self-starter
Tactful
Take initiative
Task and result oriented
Team player
Thick skinned
Tolerant
Understanding
Work independently

TOOLS AND EQUIPMENT

Burster
Calculators
Computer (Mainframe and PC)
Copy machine
E-mail
Enveloper
Fax
Labels
Office Supplies
Phone (Voice mail)
Printed forms
Printer
Schedule
Shredder
Typewriter

KNOWLEDGE AND SKILLS

Active listener
Basic computer knowledge
Can delegate responsibility
Communicate (public speaking and interpersonal)
Customer service skills
Decision making
Follow instructions
Foreign trade customs
Handle stress
High school degree+
Industrial experience
Knowledge of when to ask for help
Math - statistics, billing regulations, basic math, calculators
Memory skills
Organizational
Phone system
Prioritize
Problem Solving
Product knowledge
Proofreading
Reading - zip code book, instructions, postal regulations, research, manuals, comprehension, critical details, safety regulations
Time management
Typing keyboarding
Writing - memos, contact reports, document explanations instructions

SKILLS FOR TOMORROW

THE HIBBERT GROUP CURRICULUM

DATA SERVICES, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE

DACUM PANEL MEMBERS

Ellen Hricko - Data Services Supervisor
Yvonne Smith - Inventory Control Supervisor
Pat Duncan - Data Coordinator
Lisa Wagner - Senior Customer Service Representative

DACUM FACILITATOR

Elaine Weinberg
Director, Workplace Literacy Project, MCCC

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Education Specialist, MCCC

Linda Alvarez
Administrative Secretary, MCCC

DATE

December 14, 1992

LOCATION

Mercer County Community College

DATA SERVICES, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE work together as a marketing support team to coordinate timely and accurate processing of customer requests.

The Curriculum will include:

READING

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to read and comprehend:

- Company procedures
- Computer screen information
- Critical Information
- Customer written requests
- Departmental procedures
- Detailed information
- Discipline actions
- Exceptions
- Get details quickly
- Inferences
- Job jacket instructions
- Material for interpretation
- Materials that must be retained
- Materials that must be summarized
- Memos
- Performance appraisal reviews
- Postage regulations
- Reports and instruction manuals
- Safety instructions and manuals
- Scripts
- Self improvement material
- Shipping and receiving documents
- Source documents

WRITING

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to write accurately, effectively and concisely in order to communicate with customers and other employees at all levels of the organization.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to write the following:

- Articles for Horizon
- Business letters
- Contact reports
- Correct form with:
  - Clarity
  - Conciseness
  - Proper grammar
  - Passive and active voice
  - Style
- Interdepartmental resumes and job applications
- Jacket instructions
- Logs-update and create
- Meeting agendas
- Meeting minutes
- Memos
- Notes for meetings
- Personal ideas
- Procedures
- Programming change requests (PCR)
- Proofread
- Rejection letters
- Requests
- Scripts
- Status reports (not more than 2 pages)
- User documentation

MATHEMATICS

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to perform basic arithmetic functions, provide correct job estimates, reconcile inventory discrepancies, calculate postal regulations accurately, correctly and logically, and evaluate output to determine if correct logic was applied.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to do:

- Averaging
- Basics (addition, subtraction, multiplication and division)
- Charts and graphs
- Estimating
- Formulas for spreadsheets
- Logic
- Measuring height and weight
- Percentages
- Postal regulations
- Reconciliations

ORAL COMMUNICATION/ INTERPERSONAL SKILLS

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will interact verbally and nonverbally with customers and employees at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as team members.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Be assertive
- Be courteous on the phone
- Communicate effectively
- Communicate potential problems and solutions
- Communicate with all levels of the organization
- Communicate with customers
- Communicate with voice mail
- Cross-train others within the organization
- Deal with criticism
- Deal with difficult people
- Diplomatically say no
- Discuss and resolve errors
- Inform others of progress
- Perform conflict resolution
- Present a positive self-image
- Provide clear, informative, concise instructions
- Resolve conflicts
- Team build
- Use active listening skills
- Use interview skills
- Use public speaking techniques
- Utilize telephone courtesy

TECHNOLOGY IN THE WORKPLACE

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to comprehend and use the PC and mainframe computer terminals and other office equipment, operate simple machines and understand and apply safety procedures in the workplace.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Adapt to changing technology and software applications
- Handle simple machines
- Understand the DOS and Windows Environments
- Use D-Base and Fox Pro
- Utilize Excel and Word

PROBLEM SOLVING CRITICAL THINKING

GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to state the problem, identify and test alternatives, select the best solution, implement action, and evaluate results.

Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Adapt to rush situations
- Create proactive problem solving solutions
- Determine accept/reject situations
- Determine solutions for problems
- Explain problem situations
- Handle crisis situations
- Identify problems
- Make judgment calls
- Pay attention to details
- Plan course of action
- Resolve conflict situations
- Respond to emergencies
- Set priorities
- Think critically
- Utilize time management skills

NOTES

WORKPLACE BASIC SKILLS

DACUM
THE HIBBERT GROUP
WAREHOUSE AND PRODUCTION PERSONNEL

DACUM PANEL MEMBERS

John Companick - Receiver, Warehouse
Bob Pettway - Picker, Packer, Sorter & Meter Operator
Luis Matos - Receiver
Joyce Montevino - Picker
Arlene Wharton - Assembler & Meter Operator
Peggy Wingo - Assembler

DACUM FACILITATORS

Lorna Burt, Pat Clopp
Education Specialists, MCCC

RECORDERS

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Education Specialists, MCCC
Barry Batorsky
Curriculum Developer, MCCC

DIRECTOR

Elaine Weinberg
Workplace Skills Project, MCCC

DATE

October 13 and 14, 1992

LOCATION

Mercer County Community College

PRODUCTION and **WAREHOUSE PERSONNEL** communicate with each other to receive, locate, pick, pack, mail or ship materials accurately and efficiently.

TASKS

I. Receiver								
A. Job Preparation	1. Fill out Time Card	2. Turn On Equipment	3. Unhook equipment (Jack, Forklift, etc.)	4.Do Maintenance Check				
B. Unload Truck	1. Communicate with Driver	2. Ask Driver to Chock Wheels on Truck	3. Read Bill	4. Decide if Literature or Premium Storage Material	5. Decide on Location (Corporate, Service Center, 21, or Hancock)	6. Communicate if Necessary with Inventory Control	7. Call Premium Supervisor if Receiving Premium Items	8. Check Visually for Damage
	9. Decide Which Vehicle to Use (Forklift, Manual Jack, Electric Jack, etc.)	10. Unload	11. Decide on Staging Area (Based on Site)	12. Put Stock in Staging Area	13. Verify Quality	14. Verify Quantity		
C. Log Incoming Items Into Computer	1. Read Bill	2. Decide Course of Action	3. Check File for Purchase Order	4. Enter Information Into Computer	5. Print Preliminary Receiving Tag	6. Tape Tag to Stock		
D. Receive Stock	1. Take Items in Order	2. Transport Stock to Table	3. Decide to Average or to Count	4. Transcribe Tag Information to Receiver Form	5. Cut Open Carton(s) According to Procedures	6. Identify Stock for Warehouse	7. Perform Scale Count to Check Quantity	8. Call Inventory Control If No Code
	9. Complete Receiver Form	10. Enter Information onto Computer	11. Print Tag From Computer	12. Put Tag on Stock	13. Take Preliminary Tag, Sample, & Written Material to Inventory Control	14. Fill Out Time Card		
E. Pass to Locator	1. Decide Whether It Is Bulk or Small Shelf Stock	2. Communicate with 2nd Floor Stock to Determine Need for Replenishment	3. Separate and Move This Stock to Appropriate Area	4. Inform Bulk Locator of Exceptions	5. Decide Method of Transport	6. Move Stock	7. Straighten Area After Each Job and at End of Day	
II. Locator								
A. Job Preparation	1. Fill out Time Card	2. Get Supplies	3. Find Equipment	4. Check Equipment				
B. Determine Stock Location	1. Check Staging Areas	2. Go To Staging Area	3. Check Amount of Stock To Be Moved	4. Determine by Date Order Which Stock to be Moved First	5. Check for Space Available	6. Decide On Location	7. Decide On Method of Transport	8. Take To Location
C. Locating	1. Put Stock Into Location	2. Fill Out Warehouse Slip	3. Fill Out Tag	4. Tag Stock	5. Take Paperwork to Secretary To Be Entered In Computer			
D. Re-Warehousing	1. Decide Whether Space Is Appropriate	2. Shift Smaller Quantities to Smaller Location	3. Fill Out Re-Warehouse Slip	4. Fill Out Unload Slip	5. Decide On Space Usage	6. Turn In Forms	7. Fill Out Time Card	
III. Specialty Pickers Scrapper								
A. Job Preparation	1. Fill out Time Card	2. Receive Scrap Notices from Inventory Control	3. Receive Transfer Notices	4. Decide Course of Action If Any				
B. Scrap Items	1. Go to Location	2. Check Notice Against Stock	3. Remove Stock	4. Bring Scrap to Scrap Area	5. Verify All Scrap Material With Warehouse Manager	6. Remove One Sample	7. Fill Out Scrap Notice for Verification	8. Send Form and Sample to Inventory Control
	9. Inform Manager When Scrap Area Filled	10. Decide on Transport Method	11. Load Scrap Truck	12. Fill Out Time Card				
Transfer Stock Person	1. Fill out Time Card	2. Go to Location	3. Check Notice Against Stock	4. Remove Stock	5. Pick Items	6. Count Item Quantity	7. Band/Secure Item	8. Return Unused Material
	9. Move On to Next Item on List	10. Deliver Within Building a. Get Receipt Signature b. File Copy of Delivery Receipt	11. Deliver Outside Material to Messenger Area a. File One Copy of Delivery Receipt b. Load Truck	13. Straighten Area After Each Job and at End of Day	12. Fill Out Time Card			
IV. Sorter								
A. Job Preparation	1. Fill out Time Card	2. Get Supplies	3. Look at Pick List	4. Look at Graph Sheet for Quantities				
B. Pick Batches	1. Verify Order Against Pick List and Graph Sheet	2. Take Requisition and Graph Sheets from Work Table	3. Set up Table According to Graph Sheet	4. Place Stock onto Proper Number on Table				
C. Sort	1. Count Appropriate Number for Each Square	2. Place Items on Appropriate Square	3. Verify Against Requisition, Pick List and Square for Accuracy	4. Get Off-floor Pieces from Staging Area to Complete Order				
D. Completion of Sorting	1. Initial Requisition	2. Place in Basket for on Skid	3. Repeat as Necessary	5. Straighten Area	4. Fill out Time Card			

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TASKS

V. Physical Count	1. Receive Forms From Inventory Control	2. Log into Physical Count Binder	3. Go To Location	4. Verify Item Code Number	5. Count Stock	6. Fill Out Form	7. Verify With Computer	8. Log Out of Binder
	9. Remove Last Copy for Warehouse File	10. Give Form to Supervisor	11. Straighten Area After Each Job and at End of Day	12. Fill Out Time Card				
VI. Picker								
A. Job Preparation	1. Fill out Time Card	2. Get Requisitions	3. Check Supplies (Clips, Bands, etc.)	4. Take Cart/Rack				
B. Pick Items	1. Go To Location	2. Check Stock Against Requisition or Transmittal Form	3. Check Error Listing for Alternative Location if Stock is Not There	4. Pick Items	5. Organize into Batch Orders if Required	6. Count Item Quantity	7. Decide How to Count Items: Scale, Manual, or Carton Counts	8. Band/Secure Item
	9. Return Unused Material	10. Move On to Next Item on List	11. Repeat as Necessary	12. Decide Which Tag to Use If One is Required (Color Coded)	13. Tag Order	14. Place Order on Rack/ Skid	15. Decide Status of Stock (Accept?/Reject?)	16. Complete Order Form to Replenish Used Stock
	17. Use an "Unload Slip" on Depleted Stock							
C. Complete Job	1. Do Paperwork	2. Check Off Items on Requisition List or Transmittal Form	3. Initial Requisition List or Transmittal Form	4. Place List on Order	5. Fill Out Time Card	6. Fill Rack/Skid	7. Pass Picked Material On to Packer/Sorter/ Staging Area	8. Straighten Area After Each Job and at End of Day
VII. Assembler								
A. Job Preparation	1. Fill out Time Card	2. Read the Requisition, Transmittal Form, or D-Jacket	3. Check Stock Against Requisition	4. Set Stock in Order on Table	5. Make Sure There is Someone To Do the Job	6. Have Tools Ready	7. Perform Specialty Tasks On Material If Required	
B. Collate	1. Pick Up One Piece of Each Item	2. Put Into Pile, Binder, Envelope, etc.	3. Check Number Required	4. Decide How Many Per Pile	5. Stack Criss-Crossed	6. Count Materials	7. Give Sample to Supervisor	8. Straighten Area After Each Job and at End of Day
	9. Fill Out Time Card							
C. Count Sets According to Requisition, Transmittal Form or D-Jacket	1. Determine Method of Counting by Hand or Scale	2. Count Amount Required	3. Secure Stack	4. Put in Piles	5. Pack Into Box	6. Stack Items on Skid or Pass to Designated Area	7. Give Sample to Supervisor	8. Straighten Area After Each Job and at End of Day
	9. Fill Out Time Card							
D. Insert Into Envelopes	1. Label Envelopes	2. Flip Envelopes Open	3. Check if Stock Needs Folding	4. Fold When Required	5. Pick Up One Item at a Time	6. Give Sample to Supervisor	7. Insert One Envelope at a Time	8. Check Destination - Foreign or Domestic?
	9. Put in Separate Piles	10. Hand Seal if Too Thick	11. Set on Rack, Cart, or Mail Tray for Meter Operator	12. Pass to Meter Operator	13. Straighten Area After Each Job and at End of Day	14. Fill Out Time Card		
E. Make Boxes	1. Put Stock on Table	2. Inspect Flat Box	3. Fold On Scored Lines	4. Follow Plans for Box	5. Give Sample to Supervisor	6. Insert Material if Necessary	7. Stack on Skid	8. Straighten Area After Each Job and at End of Day
	9. Fill Out Time Card							
F. Folding	1. Fold According to Instructions	2. Give Sample to Supervisor	3. Repeat as Required	4. Straighten Area After Each Job and at End of Day	5. Fill Out Time Card			
G. De-collate	1. Take Assembled Stock	2. Open Assembled Stock	3. Put Each Piece on Separate Pile	4. Perform Course of Action from D-Jacket Instruction (Re-use, Discard, Stock)	5. Straighten Area After Each Job and at End of Day	6. Fill Out Time Card		
VIII. Packer								
A. Job Preparation	1. Fill Out Time Card	2. Get Rack/Skid	3. Check Supplies	4. Check Equipment				
B. Check Order	1. Check Requisition or Transmittal Form or D-Jacket	2. Check Picked Items Against Requisition, Transmittal or D-Jacket	3. Check Mailing Destination	4. Check Materials Visually for Quality	5. Check Quantity	6. Repeat as Necessary		
C. Packing	1. Select Appropriate Size Carton, Bubble Bag, or Tape	2. Make Box	3. Place Items Into Box	4. Place Bubble Wrap in Box On Top of Materials	5. Seal Box	6. Remove Label From Requisition or Packing Slip	7. Place Packing Slip (Inside or Outside)	8. Apply Shipping Label to Package
	9. Apply Quality Label to Package	10. Initial Requisition	11. Clip Perforated Portion of Requisition to Packed Carton	12. Decide on Location (Meter Operator, Messenger, Other)				

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TASKS

D. Special Packing (Trade Shows)	1. Receive From Quality Control After Inspection	2. Apply Company Label	3. Apply Special Labels	4. Place On Conveyor Belt			
E. Prepare Paperwork	1. Choose Appropriate Paperwork (Meter Operator, Messenger, etc.)	2. Do Paperwork	3. Send To Location	4. Straighten Area After Each Job and at End of Day			
IX. Meter Operator							
A. Job Preparation	1. Fill Out Time Card	2. Turn On All Equipment	3. Prepare Machine as Necessary	4. Check Supply of Containers			
B. Weigh Materials	1. Read Requisition or D-Jacket	2. Make Up Meter Slip if No Requisition	3. Weigh Each Type of Package	4. Determine Form of Postage	5. Set Meter to Print Amount Required		
C. Affix Postage	1. Send Envelopes Through Machine	2. Put Postage on Packages	3. Fill Out Meter Slip				
D. Prepare for Shipping	1. Separate Mail Types	2. Fill Trays or Hamper	3. Close Out the Machine	4. Send to Shipping at Day's End	5. Take Meter or Requisition Slips to Office at Day's End	6. Straighten Area After Each Job and at End of Day	7. Fill Out Time Card
X. Shipper							
A. Job Preparation	1. Fill out Time Card	2. Get Check Supplies	3. Check Equipment	4. Turn On Equipment			
B. Receive Material From Other Floors	1. Check Quality	2. Send Damaged Packages Back to Appropriate Department	3. Repair Damaged Goods If Possible	4. Decide Priority	5. Separate According to Shipper		
C. Check Paperwork	1. Check Quantity	2. Check for Shipping Instructions	3. Determine Shipping Method If Necessary	4. Follow Procedures for Customs (Overseas)	5. Follow Procedures for Shippers	6. Communicate With Customer Service If Necessary	
D. Documentation	1. Weigh Unmetered Packages	2. Transcribe Information on Shipping Form	3. Affix Documentation to Material	4. Save Copies of Necessary Documentation	5. Call Shippers If Necessary		
E. Loading	1. Determine Equipment To Be Used	2. Decide Method of Securing Packages If Necessary	3. Secure Skid Load	4. Label If Necessary	5. Communicate With Driver	6. Load	7. Put Information Into Computer	8. Straighten Area After Each Job and at End of Day
	9. Fill Out Time Card						

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TRAITS AND ATTITUDES

Able to accept criticism
Able to make decisions
Accurate
Aware
Congenial
Consistent
Courteous
Detail oriented
Flexible
Healthy
Mechanical aptitude
Neat
Open minded
Organized
Patient
Positive thinker
Punctual
Quality conscious
Safety conscious
Speed
Tactful
Trustworthy
Willing to learn

TOOLS AND EQUIPMENT

Allen wrenches
Band cutters
Bander
Blades
Broom/dust pan
Bubble wrap
Cartons
Carts/Racks
Calculator
Cheshire machine (labels envelopes)
Chip board
Collators
Computer/Printer
Copy machine
Crow bar
Dolly
Envelopes
Fax
File cabinet (storage)
Fork lift
Glue/rubber cement
Hammer
Hampers
Hand sealer
Hole punch machine
Inserter
Jack (electric and manual)
Label machine
Labels
Ladders
Letter folder
Mail basket
Mail trays
Meter
Pads
Pallet (skid)
Paper cutter
Pens/Pencils/Markers
Rubber fingers
Safety boots
Scales
Scissors
Screw driver
Shrink wrapper
Sort Wick
Sponges
Static guard
Steel plate (ramp)
String
Tape machines/tape
Telephone
Time clock
Tool box
White Out/Rubber Bands/Paper clips/Stapler
Wrapper (manual and electric)
Wrench

KNOWLEDGE AND SKILLS

Communication
- In Person
- On Telephone

Geography
- Knowledge of states, geographic regions, other countries

Keyboard

Know How to Maintain Equipment
- Knowledge of mechanical operations
- Knowledge of simple machines

Knowledge of Work Area

Mathematics
- Addition, subtraction, multiplication, division
- Measuring weights and measures
- Counting
- Estimating
- Calculating time in decimals
- Military time

Memory Skills
- Remembering each procedure
- Paying attention to details, numbers, procedures

Organization Skills

Operate Manual Tools

Problem Solving/Decision Making

Product Knowledge

Reading
- Paperwork
- Instructions
- Abbreviations
- Procedures

Reading/Speaking/Understanding English

Safety Regulations and First Aid
- Know how to carry loads correctly

Writing
- Legible handwriting
- Comments
- Forms

WORKPLACE SKILLS PROJECT

THE HIBBERT GROUP CURRICULUM

WAREHOUSE AND PRODUCTION PERSONNEL

DACUM PANEL MEMBERS

Barry Batorsky - Curriculum Developer
Scott Freeman - Production Supervisor
Pat Clopp - Educational Specialist, MCCC
Don McKim - Literature Fulfillment Manager
Luis Matos - Receiving
Bob Pettway - Production

DACUM FACILITATORS

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Educational Specialist, MCCC

Elaine Weinberg,
Director, Workplace Skills Project, MCCC

RECORDER

Ave Pollak
Education Specialist, MCCC

DATE

October 16, 1992

LOCATION

Mercer County Community College

The **PRODUCTION AND WAREHOUSE PERSONNEL** communicate with each other to receive, locate, pick, pack, mail or ship materials accurately and efficiently.

The Curriculum will include:

READING

GOALS:

The **PRODUCTION AND WAREHOUSE PERSONNEL** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

Topics:

The **PRODUCTION AND WAREHOUSE PERSONNEL** will be able to read:

- Bills of lading
- Company procedure updates
- Company procedures
- Company newsletters
- Company benefit booklets
- Computer screens
- Delivery slips
- Department procedures
- Direct mail jackets
- Discipline action forms
- Information on first aid kit
- Job postings
- Job number for time cards
- Locations
- Memos
- Newspapers
- Numbers
- Paycheck stubs
- Performance appraisal reviews
- Pick sheet
- Postage records
- Requisitions
- Safety signs
- Safety instruction in booklets
- Scales
- Sorting charts
- Transmittal forms

WRITING

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to use proper punctuation, spelling, and grammar to complete forms, routine paperwork, and special reports.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to write the following:

- All paperwork with correct spelling
- Articles for "Horizon"
- Bag tags
- Delivery receipts
- ID tags for hampers
- Internal job applications
- Job applications
- Letters to customers
- Location tags
- Location sheets
- Logs
- Long-term forms
- Meeting agendas
- Memos
- Minutes at meeting
- Notes at meeting
- Personnel forms
- Physical count requisition logs
- Postal records
- Production reports
- Re-warehousing slips
- Sign offs
- Stock replenishment forms
- Suggestions
- Time cards
- Unload slips
- Using all types of terminals
- Work orders to maintenance

ORAL COMMUNICATION/ INTERPERSONAL SKILLS

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will interact verbally and nonverbally with workers at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as team members.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Build consensus
- Communicate with group leaders
- Communicate with other groups to avoid duplication
- Communicate with co-workers
- Communicate with supervisors
- Conduct personal communication
- Contribute to department quality meetings
- Deal with criticism
- Discuss work-related problems
- Discuss errors
- Give and receive information
- Handle disputes
- Inform others in department of progress of tasks
- Know how to be tactful and diplomatic in work-related situations
- Participate in active listening
- Provide clear, informative instruction
- Report work-related problems
- Talk on phone for work-related issues
- Teach new employees job tasks
- Understand company expectations
- Understand and be aware of co-workers needs, moods, and problems
- Work in teams

MATHEMATICS

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to perform basic arithmetic functions, calculate in decimals, weigh, measure and estimate materials, complete packing and productivity charts and graphs, use decimal time, and complete word problems.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to do:

- Addition and subtraction
- Averages
- Basic geometry (determining space available)
- Calculations with a calculator
- Charts and graphs
- Decimal and military time
- Decimals
- Elementary algebra
- Estimating
- Measure scale counts
- Measuring
- Multiplication and division
- Packing and productivity charts
- Percents
- Postal regulations
- Ratios
- Weighing
- Word problems

TECHNOLOGY IN THE WORKPLACE

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to comprehend mechanical processes and procedures, understand and apply safety procedures in the workplace, read scales, and understand simple machines and computer terminal operations.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Handle simple machines
- Understand basic science concepts as they relate to the company
- Have basic computer awareness

ENGLISH AS A SECOND LANGUAGE

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to speak, understand and write in English in order to function effectively, efficiently and safely in the workplace.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Read English
- Speak English well enough to be understood by co-workers
- Understand co-workers
- Understand work-related expressions
- Understand American expressions and idioms
- Write English

PROBLEM SOLVING

GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to state the problem, identify and test alternatives, select the best solution, implement action and evaluate results.

Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Accept/reject decision making
- Adapt to changes and improvise
- Anticipate a problem
- Check and make corrections
- Deal with frustration
- Decide priorities
- Draw conclusions
- Make proper assessment of tasks
- Make hypotheses about problems
- Make judgments about work procedures in their own tasks
- Make visual discriminations
- Manage time and equipment priorities during the workday
- Resolve disagreements between co-workers
- Respond to emergencies
- Use critical thinking necessary for job decisions

NOTES

DACUM
TRANE CORPORATION
ASSEMBLER OPERATORS

DACUM PANEL MEMBERS

Robert Blair - XL90 Assembler
Mary Ann Gallagher - Assembler - Insight II
Shirley Holmes - Assembler - Insight I
Joseph Loncosky, III - Tube Assembly Coil Area
Pat Mazotas - Autobraze Coil Area
Vicki Skorut - Paper Work Assembler - Insight II
Fran Venturino - A-Line Control Boxes
Forrest S. Willis - Coil Assembly

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Organization Development Specialist, MCCC

RECORDERS

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Education Specialists, MCCC

DIRECTOR

Elaine Weinberg
Workplace Skills Project, MCCC

DATE

October 5 and 6, 1992

LOCATION

Mercer County Community College

The **ASSEMBLER** is a safety conscious team member who combines various product parts to build quality heating and air conditioning units.

ASSEMBLER POSITION

		TASKS					
I. Insight I	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Schedule	4. Check Travel Card		
	B. Check Supplies	1. Check Quantity	2. Check Availability	3. Check Quality	4. Prepare Request (Parts)	5. Replenish Parts from Kanban	6. Communicate With Supplier
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Communicate With Supplier
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs	5. Communicate Change-Over	6. Communicate With Supplier
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts	5. Inspect for Quality or Damage	6. Check for Space
		7. Push Down Line					
II. Insight II	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Travel Card			
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Check Quantity	4. Prepare Request (Parts)	5. Replenish Parts from Kanban	6. Communicate With Supplier
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Inspect Assembly with Travel Card toVerify Work Completed Accurately	6. Inspect Assembly
		7. Communicate With Supplier					
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs	5. Communicate Change-Over	6. Communicate With Supplier
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts	5. Inspect for Quality or Damage	6. Check for Space
		7. Push Down Line					
Specialty Jobs for Insight I & II							
Wiring	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Travel Card	4. Check Parts		
	B. Make Parts	1. Look at Diagram	2. Get Parts	3. Connect Wires and Pins	4. Inspect Parts		
	C. Install Part	1. Review Diagrams	2. Put part in Unit	3. Connect Wires	4. Inspect Connector and Unit	5. Communicate Errors	6. Push Unit to Next Person
		7. Look at Next Travel Card					
Testing	A. Job Preparation	1. Get Safety Equipment	2. Check Travel Card				
	B. Connect to Tester	1. Connect Electric Wires	2. Connect Gas	3. Select Model Number			
	C. Test Unit	1. Start Computer Test	2. Start Manual Test	3. Observe Results	4. Analyze Results	5. Retest Unit When Appropriate	6. Decide to Accept Reject
	D. Disconnect Unit	1. Disconnect Wires	2. Disconnect Gas	3. Reject? - Send to Repair	4. Accept? Send to Paper Station		
Paperwork	A. Job Preparation	1. Get Safety Equipment (Shoes & Gloves)	2. Review Travel Card				
	B. Check Papers	1. Check Quantity	2. Check Availability	3. Communicate With Supplier			
	C. Look at Travel Card	1. Determine Model Number	2. Determine Envelope Content	3. Determine Envelope Quantity			
	D. Make Envelopes	1. Pick Contents	2. Pick Name Tag	3. Insert Envelope Contents			
	E. Place Paperwork in Unit	1. Place Name Tag on Unit	2. Place Envelope in Unit	3. Scan Cards	4. Push Unit On		

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		TASKS					
III. XL90	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Schedule	4. Check Travel Card		
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Check Quantity	4. Prepare Request for Parts	5. Replenish Parts (Signal Light System)	6. Communicate With Supplier
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Communicate With Supplier
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs as Necessary	5. Communicate Change-Over	6. Communicate With Supplier
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts	5. Inspect for Quality or Damage	
Specialty Jobs for XL90 Tester	A. Job Preparation	1. Get Tools and Equipment	2. Check Safety Equipment				
	B. Connect to Tester	1. Review Travel Card	2. Connect Electric Wires	3. Connect Gas	4. Select Model Number		
	C. Test Unit	1. Start Computer Test	2. Start Manual Test	3. Observe Results	4. Analyze Results	5. Retest Unit if Rejected	6. Decide to Accept/Reject
	D. Disconnect Unit	1. Disconnect Wires	2. Disconnect Gas	3. Accept?-Go to Paper Station	4. Reject? - Send to Repair	5. Apply Label	
Paperwork	A. Job Preparation	1. Get Tools and Equipment	2. Check Safety Equipment				
	B. Check Papers and Envelope Contents	1. Look at Travel Card for Model Number and Envelope Content	2. Check Availability	3. Check Quantity	4. Communicate With Supplier		
	C. Make Envelopes	1. Pick Contents	2. Insert Contents in Envelope				
	D. Complete the Unit	1. Place Envelope in Unit	2. Put on Doors	3. Put in Filter	4. Put Labels on Doors		
IV. A Line	A. Job Preparation	1. Get Tools	2. Get Safety Equipment				
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Check Quantity			
	C. Assemble Parts (Sub-Assembly)	1. Pick Parts	2. Assemble	3. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	4. Inspect Assembly		
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Indicate Repairs		
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect for Placement of Parts	5. Inspect for Quality	

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		TASKS					
Specialty Jobs for A-Line Tests	A. Job Preparation	1. Get Safety Equipment	2. Set-Up - Change Test Leads When Required				
	B. Connect Wires	1. Connect Wires to Control Box	2. Attach Calibrator				
	C. Test	1. Start Test	2. Analyze Results	3. Disconnect	4. Accept? - Go to Next Station	5. Fails? - Send to Repair	
	D. Retest Unit from Repair	1. Obtain Unit	2. Repeat Tests				
SPECIALTY CLASSIFICATIONS							
V. Autobraze	A. Job Preparation	1. Get Safety Equipment	2. Get Print	3. Get Hammer and Pliers	4. Adjust Shelves	5. Adjust Flame	6. Turn Switch On
	B. Assemble Coil	1. Take Coil Out of Carton	2. Place Coil on Carousel	3. Read Print	4. Place Return Bends in Coil	5. Hammer	6. Purge
	C. Unload	1. Inspect Coil	2. Fail? a. Take Coil Off b. Send to Repair	3. Pass? a. Take Coil Off b. Place Coil in Carton c. Roll to Other Lines			
VI. Tube Assembly	A. Job Preparation	1. Get Safety Equipment	2. Receive Voucher	3. Verify Voucher with "Inspection Sheet"	4. Review Blueprint	5. Get Tools	6. Accumulate Parts
		7. Go to Work Station	8. Set Up Fixture	9. Check Parts Quality	10. Check Parts Quantity	11. Check Part Appropriateness	
	B. Assemble Product	1. Get Manifold	2. Do Flow Check on Manifold a. Accept? - Spray Red b. Reject? - Send Back	3. Place Manifold in Fixture	4. Get Tube Plate	5. Put Orifice in Manifold (as per blueprint)	6. Put Coupling Adapter On (as per blueprint)
		7. Put Label On	8. Torque Manifold	9. Remove Manifold			
	C. Load Parts	1. Load on Rack	2. Label Rack	3. Visual Inspection	4. Push Rack Down Line		
VII. Coil Assembly Test Area	A. Job Preparation	1. Get Safety Equipment	2. Check Schedule				
	B. Test Coils	1. Connect Nozzle on Coil	2. Push Pressure Button on Testing Computer	3. Perform Visual Inspection	4. Disconnect Nozzle	5. Fail? a. Mark with Red Tape b. Send to Repair	6. Make Minor Repairs
		7. Pass? - Move On					
	C. Label Coil	1. Identify Correct Label from Written Schedule	2. Place Label on Coil	3. Put Bushing Over Manifold (for protection)	4. Move Coil to Next Station		
Halo Box	A. Job Preparation	1. Get Safety Equipment	2. Get Tools	3. Locate Parts			
	B. Remove Failed Coils from Line	1. Check for Red Tape	2. Remove Coil from Rack	3. Bring Unit to Repair Station			
	C. Prepare Good Coil to Receive Freon Nitrogen	1. Take Off Line	2. Put Two Rubber Plugs Into Holes	3. Secure Plugs with Clamps	4. Raise Hood of HALO Box	5. Place Coil Inside HALO Box	6. Fasten Hose to Liquid Manifold
	D. Test Coil	1. Press Button to Start Test (includes receiving freon)	2. Fails? - Red Light a. Push Recovery Button b. Check Visually for Safety Factor c. Monitor Gauge for Nitrogen d. Take Off Clamps e. Take Coil to Repair Station	3. Pass? - Green Light a. Pinch Off Coil b. Press Recovery Button c. Monitor Gauge	4. Disconnect Hose	5. Remove from HALO Box	
	E. Braze Coil	1. Pinch Off Tube Head	2. Braze the Head	3. Remove Clamps	4. Attach Baffles to Coil	5. Take to Washer	
Washer	A. Job Preparation	1. Get Safety Equipment					
	B. Wash Coils	1. Place on Tray	2. Push Tray Through Washing Machine	3. Unclog Jam When Necessary	4. Take to Repair if Damaged	5. Pass Good Coils to Proper Location	

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TOOLS AND EQUIPMENT

Air Gun
Allen Keys
Banders
Calculator
Calibrator
Caulk Guns
Diagrams/Blueprints
Earplugs
Gas Leak Detector
Glasses
Gloves
Glue Gun
Hammers
Knives
Meters
Micrometers
Ovens
Pliers
Poke-Yoke
Purgers
Rivet Guns
Scales
Scissors
Sleeves
Tape Measure
Travel Card
Vice Grips
White Coat
Wrenches

TRAITS AND ATTITUDES

Alert
Considerate
Copes With Stress
Dependable
Easy Going
Flexible
Good Communicator
Manual Dexterity
Patient
Positive
Responsible
Safety Conscious
Takes Orders
Well
Tolerant
Understanding

KNOWLEDGE AND SKILLS

Speak and Understand English
- Communicate in English

Math
- Addition, Subtraction, Multiplication
- Read dials, charts, manuals, and rulers
- Metric
- Percentages/Ratios
- Basic Algebraic Equations

Science
- Basic Science
- Basic Electricity
- Basic Thermodynamics

Reading
- Instructions
- Diagrams/Blueprints
- Schedules
- Safety Guides
- Company Information

Writing
- Notes
- Supply Forms
- Memos
- Letters

Technical Skills
- Reading basic blueprints
- Tolerances
- Keyboarding (operating terminal)
- Typing/Word Processing

WORKPLACE SKILLS PROJECT

TRANE CORPORATION CURRICULUM

ASSEMBLER OPERATORS

DACUM PANEL MEMBERS

Barry Batorsky - Curriculum Developer
Robert Blair - Assembler-XL 90
Tom Carroll - Supervisor, Insight II
Pat Clopp - Education Specialist, MCCC
Mary Ann Gallagher - Assembler II
Dick Hess - Manager Special Programs
Carol Lewandowski - Education Specialist, MCCC
Joseph Loncosky III - Tube Assembly
Byron Taylor - Trainer
Elaine Weinberg - Director, Workplace Skills Project, MCCC

DACUM FACILITATORS

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Organization Development Specialist , MCCC

RECORDER

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Education Specialist, MCCC

DATE

October 12, 1992

LOCATION

Mercer County Community College

The **ASSEMBLER** is a safety conscious team member who combines various product parts to build quality heating and air conditioning units.

The Curriculum will include:

READING

GOAL:

The **ASSEMBLER** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

Topics:

The **ASSEMBLER** will be able to read:

- Bar charts and line graphs
- Blueprints
- Chemical sheets
- Contract
- Customer complaints
- Diagrams (process sheets)
- Discipline action sheets
- Employee benefits booklet
- Equipment instructions
- Gauges
- Job postings
- Kanban cards
- Labels
- Machine messages (eg. test screen messages)
- Memos
- Menu in cafeteria, and other work survival material
- Monthly safety hand-outs
- MSDS safety sheets
- Part numbers
- Paycheck information
- Procedures on the line
- Product literature
- Repair orders
- Safety hazard warning sheets
- Station breakdown (instructions for job)
- Team meeting notes
- Trane newsletter
- Travel Cards
- Union rules
- Visual discrimination of numbers and colors on lists and Travel Cards and Voucher
- Written rules and regulations

WRITING

GOAL:

The **ASSEMBLER** will be able to use proper punctuation, spelling, and grammar to complete forms, routine paperwork, and special reports.

Topics:

The **ASSEMBLER** will be able to write the following:

- Articles for the Union newsletter
- Articles for the TRANE newsletter
- Benefit papers
- Job applications
- Letters to customers
- Logs
- Long-term forms
- Meeting agendas
- Memos
- Minutes at meeting
- Notes at meeting
- Suggestions
- Work orders to maintenance

ORAL COMMUNICATION/ INTERPERSONAL SKILLS

GOAL:

The **ASSEMBLER** will interact verbally and nonverbally with workers at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as a team member.

Topics:

The **ASSEMBLER** will be able to:

- Accept and respect other workers' ideas, i.e., be open-minded
- Build consensus
- Communicate with supervisors
- Communicate with co-workers
- Communicate with management
- Communicate with other groups to avoid duplication
- Discuss work-related problems
- Focus on the heart of the problem
- Give job-task instruction
- Give and take constructive criticism on job quality
- Help each other by picking up tasks
- Know how to be tactful and diplomatic in work-related situations
- Listen and interpret directions
- Listen to co-workers
- Participate in monthly question and answer sessions
- Practice assertive communication with all levels of management
- Report work-related problems
- Take advantage of "open door" policy
- Understand and be aware of co-workers needs, moods, and problems
- Understand company expectations, (e.g., discipline)
- Understand tasks - area/quality
- Verify equipment with set-up people

MATHEMATICS

GOALS:

The **ASSEMBLER** will be able to perform basic arithmetic functions, interpret word problems, complete charts, interpret graphs, use decimals metric and weight measurements, and read and interpret data as required.

Topics:

The **ASSEMBLER** will be able to do:

- Addition and subtraction
- Bar charts and line graphs
- Basic geometry
- Calculating PSI
- Calculations using a calculator
- Computation of decimals
- Counting
- Estimation
- Fractions
- Measurement
- Metrics (conversion from standard)
- Micrometer applications
- Multiplication and division
- Percentages
- Problem solving applications
- Ratio, i.e., cost per unit/$ for scrap, safety, product, time and materials
- Reading and applying calibrations of tools and tape measures
- Units of measurement
- Weights (scales)
- Working with number discriminations

TECHNOLLGY IN THE WORKPLACE

GOALS:

The **ASSEMBLER** will be able to comprehend mechanical and electrical processes and procedures, understand and apply safety procedures in the workplace, read gauges, and understand cooling and heating equipment.

Topics:

The **ASSEMBLER** will understand:

- Basic chemical properties (compounds/agents/etc.)
- Basic electricity
- Basic scientific concepts as they relate to the company
- Basic principles of how air conditioning and heating units
- Flows and friction loss
- Interfacing with computers
- Principles of cooling and heating
- Properties of metals
- Properties of chemicals

ENGLISH AS A SECOND LANGUAGE

GOALS:

The **ASSEMBLER** will be able to speak, understand and write in English in order to function effectively, efficiently and safely in the workplace.

Topics:

The **ASSEMBLER** will be able to:

- Read English
- Speak English well enough to be understood by co-workers
- Understand co-workers
- Understand work-related expressions
- Understand American expressions and idioms
- Write English

PROBLEM SOLVING

GOALS:

The **ASSEMBLER** will be able to state the problem, identify and test alternatives, select the best solution, implement action and evaluate results.

Topics:

The **ASSEMBLER** will be able to:

- Accept/reject decision making
- Anticipate a problem
- Be assertive
- Deal with other people on all levels of the organization
- Decide to shut down line or call for assistance
- Discern information
- Distinguish between problem solving and decision making
- Identify faulty material or equipment
- Improve efficiency in teams
- Know when to call for parts
- Learn to use resources efficiently
- Make use of suggestion program
- Manage time and equipment priorities during the workday
- Make proper assessment of tasks
- Participate in team involvement on the line
- Resolve disagreements between co-workers
- Respond to emergencies
- Solve immediate or specific problems in voluntary teams
- Trouble shoot
- Use critical thinking necessary for job decisions

NOTES